

CLAIMS

1. A friction device for rolling up curtains and the like, including:
 - 5 a tubular roller (1), on which a curtain (1a) is wound; support means (10) for rotatably supporting said roller (1);
 - 10 a threaded stem (2) supported inside said roller (1) in a way as to create an angular displacement of said roller with respect to said threaded stem during rotation of said roller;
 - 15 the device being characterized in that it further includes:
 - 20 an operative body (3), situated slidably inside the roller (1) and screw-fitted onto said stem (2), said operative body (3) being linked to said roller (2) in relation to rotation so as to move axially along said threaded stem (2) during the rotation of the roller due to unrolling and rolling up of said curtain (1a) from a rolled up configuration (A) to a unrolled configuration (B) and vice-versa;
 - 25 first elastic means (4) and second elastic means (5) acting on said operating body (3) and in opposition to one another, so as to produce a variable friction effect on said operating body (3)
 - 30 during motion of said curtain (1a) between said unrolled configuration (B) and rolled up configuration (A), and vice-versa, such that the curtain can be driven in a substantially balanced way during rolling up and/or unrolling;

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first stop means (40) and second stop means (50) fastened to said threaded stem (2), and aimed at pressing respectively said first elastic means (4) and second elastic means (5), against corresponding first surface 5 (3a) and second surface (3b) of said operating body (3).

2. A device according to claim 1, characterized in that in said rolled up configuration (A), said first elastic means (4) are at least partially compressed and second 10 elastic means (5) are at least partially released, while in said unrolled configuration (B), said first elastic means (4) are at least partially released and second elastic means (5) are at least partially compressed.

15 3. A device according to claim 2, wherein at least one upper stop points (A*) of said curtain (1a) is defined at which said first elastic means (4) reach such a compression degree that said operative body is prevented from further moving towards said first elastic means.

20 4. A device according to claim 2 or 3, characterized in that at least one lower stop points (B*) of said curtain (1a) is defined at which said second elastic means (5) reach such a compression degree that said operative body 25 is prevented from further moving towards said second elastic means.

30 5. A device according to claim 4, characterized in that said upper stop point (A*) and lower stop point (B*) of the curtain (1a) can be adjusted in relation to said first stop means (40) and second stop means (50).

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6. A device according to one of the claims from 4 to 5, characterized in that said upper stop point (A*) and lower stop point (B*) of said curtain (1a) can be
5 adjusted in relation to the dimensions and/or the nature of said first elastic means (4) and second elastic means (5).

7. A device according to one of the claims from 1 to 6, 10 characterized in that said threaded stem (2) is supported in stationary configuration by said support means (10) such as to allow said roller (1) to rotate with respect to the threaded stem (2) during unrolling and/or rolling up of said curtain (1a).

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8. A device according to one of the claims from 1 to 6, further including a speed reduction group (6), aimed at driving said threaded stem (2) into rotation with respect to said roller (1), by angular displacements reduced with 20 respect to the latter, during unrolling and rolling up of said curtain (1a).

9. A device according to one of the previous claims, characterized in that said operative body (3) is a cylinder, which features said first surface (3a) and second surface (3b) and which has means for prismatic coupling with the roller (1).

10. A device according to claim 9, characterized in that 30 said means for prismatic coupling include at least one tooth (30) made on said cylinder (3) and guided in a

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corresponding inner longitudinal groove made in the roller.

11. A device according to claim 9 or 10, characterized in
5 that said means for prismatic coupling include a pair of teeth (30) made on said cylinder (3) in diametrically opposite positions and guided in corresponding inner longitudinal grooves made in the roller (1).

10 12. A device according to one of the previous claims, characterized in that said first stop means (40) and second stop means (50) include respective nuts screwed to said threaded stem (2).

15 13. A device according to one of the previous claims, characterized in that said first elastic means (4) and second elastic means (5) of resilient material, are freely fitted on said threaded stem (2), close to one another.

20 14. A device according to claim 13, characterized in that said first elastic means (41) and second elastic means (51) are either spheroid or ellipsoid blocks and are made of resilient material, having holes along a diametrical 25 axis, through which said threaded stem (2) passes.

15. A device according to claim 13 or 14, characterized in that said resilient material is neoprene gum or any other kind of synthetic or natural material.

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16. A device, according to any of the claims from 13 o
15, characterized in that each of first elastic means
(41) and second elastic means (51) have different
compression characteristics, due to the resilient
5 material of different hardness.

17. A device according to any of the claims from 13 to
16, characterized in that each of said first elastic
means (41) and second elastic means (51) have
10 corresponding peripheral facings, which avoid
interference with the inner surface of the roller (1).

18. A device according to any of the claims from 13 o 17,
characterized in that each of said first elastic means
15 (41) and second elastic means (51) have different
diameter.